

%\$ ' [ fc » Ufh] [ Y ' F Y ] gYVØW X Y f ' ZØf  
i bhYfk Y [ g

K ]f \ UVYb ' %\$ ' [ fc » Ufh] [ Y ' F Y ] gYVØW X Y f ' U i g [ Yk Å \ hž X ] Y ' k ]f  
i bhYfk Y [ g ' YgYb ' \_ØbbYbž ' bUW X Ya ' k ]f ' Ghi bXYbž ' j ] Y ' ' Y ] W h  
HU [ Y ' U i Z ' Ub [ Yb ' F Y ] gYb ' a ] h ' X Ya ' ? cdZ ] b ' 6ØW X Yfb  
j Yf [ fUVYb ' j YfvfUW X h ' \ UVYb " ' Hc ' ' Y ' F Y ] gYVØW X Yf ' % " 8 Yf  
GW X bYY ' XYg ' ? ] ' a UbXgW X UfcVmi9fbYgh ' < Ya ] b [ k Um i K Ybb ' G ] Y  
ØVYf ' 9fbYgh ' < Ya ] b [ k Um i bX ' [ fc » Ufh] [ Y ' F Y ] gYVØW X Yf  
gdfYW X Ybž ' \ UVYb ' G ] Y ' Y ] bY ' [ fc » Y ' 5i gk U \ ' ' ' ÆW ' \ UVY ' a ] W X ' ZØf  
H \ Y ' Gbck g ' cZ ' ? ] ' a Ub ' Ufc ' YbhgW X ] YXYbž ' XU ' Yg ' ZØf ' a ] W X ' Y ] b  
k Yb ] [ ' GYbh ] a YbhU ' ] hÅh ' Ybh \ Å ' h ' ' ÆW ' \ UVY ' X ] Y ' ? i fn [ YgW X ] W X hY  
[ Y ' YgYbž ' \_i fn ' VYj cf ' ] W X ' & \$ % \$ ' XYb ' ? ] ' a UbXgW X Ufc  
VYgh ] Y [ Yb ' \ UVY " ' 9g ' \ Uh ' a ] f ' VY ] ' a Y ] bYa ' 5i Zgh ] Y [ ' b ] W X h  
[ Y \ c ' ZYb ' i bX ' Yg ' ] gh ' b ] W X h [ YfUXY ' j c ' ' Yf ' C dh ] a ] ga i gž ' UVYf  
Yg ' ] gh ' Y ] bY ' [ fc » Ufh] [ Y ' / Ua d ^ Y ' ' ] d /

K ]f \ UVYb ' %\$ ' [ fc » Ufh] [ Y ' F Y ] gYVØW X Yf ' U i g [ Yk Å \ hž X ] Y ' k ]f  
i bhYfk Y [ g ' YgYb ' \_ØbbYbž ' bUW X Ya ' k ]f ' Ghi bXYbž ' j ] Y ' ' Y ] W h HU [ Y  
U i Z ' Ub [ Yb ' F Y ] gYb ' a ] h ' X Ya ' ? cdZ ] b ' 6ØW X Yfb j Yf [ fUVYb ' j YfvfUW X h  
\ UVYb "

Hc ' ' Y ' F Y ] gYVØW X Yf

% " 8 Yf ' GW X bYY ' XYg ' ? ] ' a UbXgW X UfcVmi9fbYgh  
< Ya ] b [ k Um

K Ybb ' G ] Y ØVYf ' 9fbYgh ' < Ya ] b [ k Um i bX ' [ fc » Ufh] [ Y ' F Y ] gYVØW X Yf  
gdfYW X Ybž ' \ UVYb ' G ] Y ' Y ] bY ' [ fc » Y ' 5i gk U \ ' ' ' ÆW ' \ UVY ' a ] W X ' ZØf H \ Y  
Gbck g ' cZ ' ? ] ' a Ub ' Ufc ' YbhgW X ] YXYbž ' XU ' Yg ' ZØf ' a ] W X ' Y ] b k Yb ] [ ' GYbh ] a  
YbhU ' ] hÅh ' Ybh \ Å ' h ' ' ÆW ' \ UVY ' X ] Y ' ? i fn [ YgW X ] W X hY ' [ Y ' YgYbž  
\_i fn ' VYj cf ' ] W X ' & \$ % \$ ' XYb ' ? ] ' a UbXgW X Ufc ' VYgh ] Y [ Yb ' \ UVY "

9g\Uh'a ]f'VY]a Y]bYa '5i Zgh]Y[ 'b]W\h[ Y\c`ZYb'i bX'Yg']gh'b]W\h  
[ YfUXY'j c`Yf'c dh]a ]ga i gž UVYf'Yg']gh'Y]bY' [ fc» Ufh][ Y'@\_hØfYž  
X]Y'X]Y'NY]hi bX'?'i 'hi f'k ]XYfgd]Y[ Y'hž]b'X]Y'<Ya ]b[ k Um  
Y]b[ YVYhYh'k Uf' 'ni a ' ; i hYb'cXYf'ni a 'G\W`Y\W'hYb"

&"< ca a U[ Y'Ub'?' UhU`cb]Yb'j cb'; Ycf[ Y'c fk Y`

B]W\h[ YfUXY'Y]bY'k Y]hYfY'ZfØ\`]W\Y'; YgW\]W\hYž UVYf'c fk Y`  
a U\W'h'b]W\h'ZfØ\`]W\''9[ U`ž'cV'G]Y'Gcn]U`]gh'cXYf'B Uh]cbU`]gh'g]bXž  
G]Y' \_ØbbYb'b]W\h'UbXYfgž'U`g'j cb'<ca U[ Y'hc'7 UhU`cb]U'c fk Y`g  
dYfgØb`]W\Ya '6Yf]W\h'ØVYf'gY]bY'9fZU\fi b[ Yb'Ui g'gY]bYf'NY]h]b  
GdUb]Yb'k Å\fybX'XYg'6Øf[ Yf\_f]Y[ g'VYk Y[ h'ni 'k YfXYb"

GY]bY'6YgW\fy]Vi b[ '6UfW`cbUg'bUW\`XYb'YfghYb'9fZc`[ Yb'XYf  
'ca a i b]ghYb']gh'Yf\YVYbX'i bX'j c`Yf'<cZbi b[ 'ZØf'X]Y'@]b\_Y  
i bhYf'gY]bYa 'Di V`\_i a 'fa ]W\`Y]b[ YgW\`cggYbŁ"K Yf'gY]bY  
J cf[ YgW\]W\hY' \_Ybbhž'XYf'k Y]» ž'XUgg'Yg'ZØf'X]Y'@]b\_g\ÅbXYf  
'Y]XYf'b]W\h'gc'[ i h'Ui g[ Y\h"

' "'? cb'H]\_]j cb'H\cf'< YmYfXU\`

?cb'H]\_]gh'Y]bY'fh]Ya `]W\Ł'a cXYfbY'; YgW\]W\hY'ØVYf'5VYbhYi Yf  
i bX'HUdZyf\_Y]h]b'XYb'hfcd]gW\Yb'A YfYbž'ZU`g'Yg'Ya U`g'Y]bY  
[ Y[ YVYb'\Uh"-%- (+ a U\W'hYb'g]W\`H\cf'<YmYfXU\`i bX'gY]bY  
gYW\g\_ØdZ[ Y'bcfk Y[ ]gW\Y'7fYk'Ui Z'XYb'K Y[ ž'i a 'ni 'VYk Y]gYbž  
XUgg'Dc`mbYg]Yf' ]b'dfÅ\_c'i a V]Ub]gW\Yf'NY]h'Ui g'GØXUa Yf\_]U'i bX  
b]W\h'Ui g'5g]Yb'Y]bk UbXYfhYb"

9f'XUW\hYž'XYf'VYghY'K Y[ ž'X]Yg'ni 'hi bž'gY]'Ui Z'Y]bYa ' :`c» "'9]b  
: `c» ž'XUg'bUW\`XYb'XUa U`g'j YfZØ[ VUfYb'9bhk ØfZYb'i bX  
HYW\bc`c[ ]Yb'a cXY`Yfhi bX'[ YVUi h'k i fXY"C\ž'i bX'X]Y'FY]gY  
k Uf'\*"- \$\$ \_a 'f( "' \$\$'A Y]'YbŁ'ØVYf'XYb'DUn]Z]gW\Yb'c nYUb"K Ug  
ZØf'Y]b'A Ubb"

( "'B ch]nYb'j cb'Y]bYf' \_Y]bYb'≠bgY`j cb'6]`6 fmgcb

K Ybb'G]Y'6f]hY'g]bXž']gh'XUg'ni a '@UW\Yb"'I bYfV]h]W\''≠W'k Y]»  
b]W\hž'cV'Yg'gc`i gh][ ]ghž'k Ybb'G]Y'\_Y]b'6f]hY'g]bX' 'G]Y'a ØggYb

Yg'a ]W'k ]ggYb`UggYb"5V[ YgY\Yb'j cb'gY]bYf<Y]hYf\_Y]h'[ ]Vh  
BchYg'Zfca`U'Ga U`'g`UbX`Y]bYb'[ fc» Ufh][ Yb'9]bV`]W\_`]b`X]Y  
Vf]h]gWXY`?i`hi`fi`bX`A`YbhU`h`h`Ui`g`XYf`G]W`h`Y]b`Yg  
5i »YbghY\YbXYb"; Ubn'ni`g`W`k`Y][ Yb'j`cb'[ fc» Ufh][ Yb  
6YgW`fY]Vi`b[ Yb`Y]b`Yg`E`i`Yfg`W`b]h`g`Vf]h]g`W`Yf`G`h`X`h`Y`i`b`X  
F`Y[ ]cb`Yb`z`X]Y`]a`a`Yf`a`]h`g`U]h]f]g`W`Yb`8`Y`h`U]`g`V`Y`g`W`f]Y`V`Y`b  
k`Yf`X`Y`b`"F`i`b`X`i`a` \`Y`f`n`Y`f`k`A`f`a`Y`b`X`z`k`]f`\_]W`i`b`X`j`Y`f`X]Y`b`h`Y]b`Y`b  
D`U`h`i`U`i`Z`Y`X`Y`f`@]g`h`Y`[ fc» Ufh][ Yf`F`Y]g`Y`V`Ø`W`Y`f`"

) " ` ð ; , \$ `HU[ Yb`i`a`X]Y`K`Y`h`j`cb`i` ð `Yg`J`Y`f`b`Y

9g]gh`Y]b`?`Ugg]\_Yf`i`b`X`Y]b`Yg`X`Y`f`[ fc» Yb`F`Y]g`Y`V`Ø`W`Y`f`"K`]Y  
\_`c`b`b`h`Y`Y`g`b]W`h`h`]Y`f`X`f]b`g`Y]b`3`5`g`]W`j`c`f`Y]b`d`U`U`f`d`Y`b`X`i`f`W  
B`c`f`k`Y[ Yb`k`U`b`X`Y`f`h`Y`z`k`U`f`]W`Y]b`V]gg`W`Y`b`k`]Y`j`c`b`i` ð `Yg`J`Y`f`b`Y  
V`Y`g`Y`g`Y`b`i`b`X`U`g`i`b[ Y`Z`A`\`f`n`Y`\`b`j`c`b`J`Y`f`b`Y`g`; Y`g`W`]W`h`Y`b`" ` ð ; , \$  
HU[ Yb`i`a`X]Y`K`Y`h`i]gh`Y]b`[ i`h`Y`f`5`i`g[ U`b[ g`d`i`b`\_`h`"

9]b`f`U`i`g`W`Y`b`X`Y`g`5`V`Y`b`h`Y`i`Y`f`U`i`g`X`Y`a``%`-`h`d`Y`\`f`i`b`X`Y`f`h`j`c`Y`f`  
\_`i`f]c`g`Y`f`5`b`g`d]Y`i`b[ Yb`i`b`X`Y]b][ Yf`Z`F`U[ k`Ø`f`X][ Yf`d`c`]h]g`W`Y`f`  
?`c`f`f`Y`\_`h`Y]h`8`Y`f`[ i`h`Y`U`h`a`c`X]g`W`Y`H`f`U`i`a`j`c`a`K`Y`h`f`Y]g`Y`b`!`G`d`U`»`°`

\* " `8`Y`f`Y`h`h`Y`C`f`h`U`i`Z`9`f`X`Y`b`j`c`b`F`c`U`b`X`<`i`b`h`Z`c`f`X

W`Y`]Y`V`Y`X]Y`g`Y`g`6`i`W`z`k`Y]`Y`g`Y]b`Y`b`h]Y`Z`Y`b`i`b`X`a`Y`h`c`X]g`W`Y`b  
9]b`V`]W\_`]b`X]Y`[ Y[ Y`b`g`A`h`n`]W`Y`b`J`c`f`V`Y`f`Y]h`i`b[ Yb`i`b`X`9`i`d`Y`X]h]c`b`Y`b  
j`c`b`5`a`i`b`X`g`Y`b`i`b`X`G`W`c`h`h`i`n`i`a`9`f`f`Y]W`Y`b`X`Y`g`G`Ø`X`d`c`g`V]Y`h`Y`h`"  
6Y]X`Y`\`U`V`Y`b`Y`g`[ Y`g`W`U`Z`h`z`U`V`Y`f`b`i`f`Y]b`Y`f`\`U`h`Ø`V`Y`f`Y`V`h`"

H`Y`@]g`h`D`U`W`c`b`9`U`f`h`\`Y`V`h`Y`X`c`W`\_`c`b`h`f`c`j`Y`f`g`\`Y`f`j`c`f`z`k`]Y`X]Y`g  
]b`X`Y`b`K`]b`X`[ Y`g`W`f]Y`V`Y`b`k`i`f`X`Y`i`b`X`j`c`b`5`b`Z`U`b[ `U`b`X`U`i  
V`Y`g`h]a`a`h`k`U`f`z`n`i`[ Y`g`W`Y`Y`b`"8`U`g`6`i`W`\_`f]h]g]Y`f`h`G`W`c`h`h`i`n`i`h]Y`Z`g`h`z`  
X`U`\`Y`f`X]Y`?`c`b`h`f`c`j`Y`f`g`Y`"K`Y`b`b`a`U`b`X`U`g`Y]Y`g`h`z`]g`h`Y`g`Y]b`K`i`b`X`Y`f`z`  
X`U`g`g`Y`f`Y`g`Ø`V`Y`f`U`i`d`h`U`i`g`X`Y`a`Y`f`a`Y`\_`U`b`U`[ Y`g`W`U`Z`h`\`U`h`"

+ " `G`c`i`h`V`m`9`f`b`Y`g`h`G`U`W`\_`Y`h`c`b

G`Ø`X`Y`b`"G`W`c`b`V`Y]a`@`Y`g`Y`b`X`Y`g`H]h`Y`g`k`]f`X`a`]f`\_`U`h`"G]Y`a`U`W`Y`b  
g]Y`b]W`h`i`a`Y`\`f`g`c`k`]Y`Z`f`Ø`Y`f`8`Y`f`G`Ø`X`d`c`k`U`f`%`-`%`%`V`n`k`" `%-`%`&`U`b

5a i bXgYb'i bX'GWčhh[ Y[ Ub[ Ybž'UVYf']b'XYf'5bhUf\_h]g'[ UV'Yg  
bcW\Hfcd\AYb'ni '[ Yk ]bbYb"

G\UW\_Yhcb'k ØfXY'VY]'X]YgYa 'i bhYfZUb[ Yb''Y]XYf'\_Y]bYb  
[ Yk ]bbYb" 'J cb'5bZUb[ 'Ub'j cb'DfcV'Ya Yb'[ Yd'U[ hž]gh'X]Yg'Y]bY  
; YgW]W'hY'a YbgW']W'Yf'5i gXUi Yf'Ub[ Yg]W'hg'j cb'K ]Xf][ \_Y]hYbž  
ZU`g'Yg'Ya U`g'Y]bY'[ Y[ YVYb'\Uh''G\UW\_Yhcb']gh'Ui ZXYa  
UbhUf\_h]gW'Yb'?cbh]bYbh'[ YghfUbXYhi bX'ZØ\fh'gY]b'HYUa 'Ui Z'Y]bY  
YfgW'ØhYfbXY'XfY]'Å\ f][ Y'Gi W'Y'bUW'XYa 'i, VYf'YVYb"

, "' ð 'H\ ]b '5 ]fj cb 'æb '? fU\_Ui Yf

%- - \*'k i fXYb'Ua 'A ci bh'9j YfYghž'XYa '\ØW'ghYb'6Yf[ 'XYf'9fXYž  
UW'h'6Yf[ ghY][ Yf'[ YhØhYhi bX'a Y\fyfy'k Y]hYfy'j Yf'Yhnh''?fU\_Ui Yf  
k Uf'Y]bYf'XYf'; 'ØW\_]W'Yb"' ðhc 'H\ ]b '5 ]f' ]gh'Y]b'YfgW'fYW\_YbXYf  
9]bV']W\_žk ]Y'Yg'k Ufž']b'X]YgYb'[ chj Yf'UggYbYb'BÅW'hYb'Ui ZXYa  
6Yf[ 'ni 'gY]b"'5'g'?YhhYfyf'i bX'5VYbhYi Yf! ž b\_]Y'\U'hY']W'Y\Yf  
Xi a a Yfk Y]gY'Ub'XYa 'HfUi a 'Z'ghž'Y]bYg'HU[ Yg'XYb'9j YfYgh'ni  
VYghY][ Yb"'B UW'XYa 'i]W'X]Yg[ Y'YgYb'\UVYž'V]b']W'a ]f'b]W'h  
g]W'Yfž'cV']W'XUg'hi b'k YfXY"

- "'5i Z'XYf'? UfhY. 'K Ufi a 'X]Y'K Y'h'gc'Ui gg]Y\hž'k ]Y  
g]Y'Ui gg]Y\h'j cb'G]a cb'; UfZ]Y'X

⇒W'']YVY'? UfhYb" ⇒W'\_Ubb'a ]f'b]W'h\Y'Zyb"'< ]Yf'[ Y\h'Yg'YXcW  
b]W'h'bi f'i a '? UfhYb/'9g']gh'Y\Yf'Y]bY'FYZYI ]cb'ØVYf'XUg'FY]gYb  
i bX'9f\_i bXYb']a '@Ui ZY'XYf'Ϸ\ f\i bXYfhY"'9g'VYfØ\fh'Ui W'X]Y  
5fh'i bX'K Y]gYžk ]Y'A YbgW'Yb'i bX']bgVYgcbXYfY'F Y]gYbXY'a ]h  
XYf'K Y'hi a 'g]Y'\Yfi a 'i]bhYfU[ ]YfYbžk Ybb'g]Y'j cb'Y]bYa 'Cfh  
ni a 'UbXYfYb'fY]gYb"'C b'H\Y'A Ud']gh'g]W'Yf']W'Yhk Ug[ YY\_] [ ž  
UVYf'Xi fW'Ui g'i bhYf\U'hgUa 'i bX']bZcfa Uh]j "

%"\$"'8]Y'GW Uhn]bgY`'j cb'F cVYfh'@ci ]g'GhYj Ybgcb

⇒W'\UVY'[ YfUXY'X]Y'GW Uhn]bgY''ni a 'YfghYb'A U'gY]h'a Y]bYf  
?]bX\Y]h'k ]YXYf'[ Y'YgYb'i bX'a i gghY'Yg'Y]b'Y[ Yb"'9g']gh']a a Yf  
bcW'[ fc» Ufh][ "'5''Y]b'X]Y'B Ua Yb'fi ZYb'X]Y'J cfZfYi XY'i bX  
5i ZfY[ i b[ '\Yfj cfž'X]Y']W'U'g'? ]bX'XUfØVYf'Ya dZUbXž'k Ug]W'hi b

k ØfXYž'k Ybb'jW [ fc» 'k ÅfY"

@cb[ 'æ\b'G]j Yfž'6]`m'6cbYgž'6`UW\_ '8c[ ž'6Yb'; i bb'i bX'Y]bY  
; YgW]W hY'j cb': fY]VYi hYfb'i bX'j Yf[ fUVYbYa'; c'X'g]bX'X]Y  
HfÅi a Y'\_Y]bYf'ž b[ Yb''Bi bž'g]Y'k UfYb'gck ]Ygc'ZØf'a ]W"

@Y]hV]'X. '5h'Ug/ '6cchg

.

8YhU]'g

6Ygi W]Yb'G]Y'i bg'Ui Z.'Y]bY!fY]gY"XY