

) ' < Ò\ Yb 'i bX 'H]YZYb 'i bgYfYf 'V]g\ Yf][Yb
F Y]gY

9g]gh'XYf'' %" '8 YnYa VYfž'U`gc 'XUW hYb 'k]f' bUhØf`]W ž'k]f
k ØfXYb 'X]Y 'i bnÅ\`][Yb ' > \ fYgYbX`]ghYb 'Yf[ÅbnYbž'X]Y ']b 'XYf
gcn]U`Yb 'Gd\ ÅfY '\Yfi a gWk]ffYb''K]f'k i fXYb 'a Y\fa U`g
bUW 'i bgYfYb 'VYghYb '9fZU\fi b[Yb ']a 'GØXdUn]Z_ '[YZfU[h/
X]Y 'UVgc 'i hYb 'A i gh!8cg]b 'X]YgYa 'HY]' 'XYf'K Y'h''BUW 'ZØbZ
A cbUhYb 'Ui ZXYf'GhfU» Y '[]Vh'Yg'gc'j]Y'Yž'UVYf'k Ybb'k]f'i bg
YbhgW Y]XYb 'a ØgghYbž'k ÅfYb 'X]Yg'i bgYfY 'Hcd') "'BUhØf`]W
k Uf'b]W h'U`Yg'dZ]fg]W ZUfVYb''I a 'X]Y'8]b[Y'Ui gni [`Y]W Ybž
\UVYb'k]f'Ui W 'i bgYfY 'Hcd!) !H]YZg'\]bni [YZØ[h'' < ² < 9B %" "
J i ` _Ub 'A ci bh'MJgi fž'J Ubi Uhi 'MJgi f']gh'Y]bYf'XYf'Ua
'Y]W hYghYb 'ni [Åb [`]W Yb 'U_hj] Yb 'J i ` _UbY 'XYf'K Y'hž'k Ug
VYXYi hYhž'XUgg'G]Y 'X]fY_h'Ub'gY]bYb 'F UbX / Ua d^Y`]d/

9g]gh'XYf'' %" '8 YnYa VYfž'U`gc 'XUW hYb 'k]f' bUhØf`]W ž'k]f'k ØfXYb
X]Y 'i bnÅ\`][Yb ' > \ fYgYbX`]ghYb 'Yf[ÅbnYbž'X]Y ']b 'XYf'gcn]U`Yb
Gd\ ÅfY '\Yfi a gWk]ffYb''

K]f'k i fXYb 'a Y\fa U`g'bUW 'i bgYfYb 'VYghYb '9fZU\fi b[Yb ']a
GØXdUn]Z_ '[YZfU[h/X]Y 'UVgc 'i hYb 'A i gh!8cg]b 'X]YgYa 'HY]' 'XYf
K Y'h''BUW 'ZØbZA cbUhYb 'Ui ZXYf'GhfU» Y '[]Vh'Yg'gc'j]Y'Yž'UVYf
k Ybb'k]f'i bg'YbhgW Y]XYb 'a ØgghYbž'k ÅfYb 'X]Yg'i bgYfY 'Hcd') "

B UhØf`]W 'k Uf'b]W h'U`Yg'dZ]fg]W ZUfVYb''I a 'X]Y'8]b[Y
Ui gni [`Y]W Ybž'\UVYb'k]f'Ui W 'i bgYfY 'Hcd!) !H]YZg'\]bni [YZØ[h''

< ² < 9B

%" 'J i ` _Ub 'A ci bh'MJgi fž'J Ubi Uhi

MUgi f`]gh`Y]bYf`XYf`Ua`Y]W`hYghYb`ni [`Ab[`]W`Yb`U`_hj`Yb`J`i`_`UbY`
XYf`K`Y`h`z`k`Ug`V`Y`X`Y`i`h`Y`h`z`X`U`gg`G]Y`X]fY`_h`Ub`gY]bYb`F`UbX`[`Y`Y`b`
i`bX`V`Y`c`V`U`W`h`Y`b`_`O`b`b`Y`b`z`k`]Y`gY]b`:`Yi`Yfk`Yf`_`X`Y`b`B`U`W`h`[a`a`Y`
Yf`Y`h`"9g]gh`k`U`f`g`W`Y]b`]W`X`U`g`i`b[`Ui`V`]W`ghY`B`U`h`i`fk`i`b`X`Y`f`z`
X`U`g`k`]f`Y`[`Y`g`Y`Y`b`_`U`V`Y`b`"@Y`g`Y`b`G]Y`a`Y`f`]a`_`W`_`K`c`Z`g_]b`
C`i`h`X`c`c`f`6`c[`c`X`Y`f`U`i`Z`F`c`i`[`\\`;`i`]X`Y`g`"

&"`G`W`k`]a`a`Y`b`a`]h`K`U`Y`b`z`H`c`b[`U`

I`bg`Z`U`Y`b`b]W`h`[`Y`b`i`[`G`i`d`Y`f`U`h]j`Y`Y]b`z`i`a`X]Y`g`Y`g`9`f`Y`V`b]g`ni`
V`Y`g`W`f`Y]V`Y`b`k`i`b`X`Y`f`V`U`f`z`X`Y`a`Ø]h[`Y`b`X`i`b`X`a`U`Y`gh`A`h]g`W`k`Å`f`Y`Y]b`
[`i`h`Y`f`5`b`Z`U`b[`"@Y`g`Y`b`G]Y`a`Y`f`]b`8`Y`f`H`U[`ž`U`b`X`Y`a`k`]f`Z`U`gh`b]W`h`
a`]h`K`U`Y`b`[`Y`g`W`k`c`a`a`Y`b`k`Å`f`Y`b`"

'`" `H`U`i`W`Y`b`]b`J`U`b`i`U`h`i`ž`G`U`a`c`U`i`b`X`H`c`b[`U`

8`U`g`Y`f`g`h`Y`A`U`i`b`h`Y`f`K`U`gg`Y`f`ni`U`h`a`Y`b`]gh`g`Y`hg`U`a`i`b`X`g`i`f`f`Y`U`
i`b`X`a`U`W`h`i`b`Y]a`_`]W`g`Ø`W`h[`ž`g`c`g`Y`f`z`X`U`gg`k`]f`i`bg`
Y`b`hg`W`]Y`X`Y`b`_`U`V`Y`b`z`Y]b`Y`b`D`5`8`≠`h`Y`bg]j`_`i`fg`ni`a`U`W`Y`b`"D`Y`h`Y`f`
`U`h`a`]h`6`f`U`j`c`i`f`V`Y`gh`U`b`X`Y`b`i`b`X`]W``b`U`U`ž`X`U`n`i`k`Y]h`Y`f`i`b`h`Y`b`
a`Y`f`"6`Y`g`c`b`X`Y`f`g`D`Y`h`Y`f`g`Y`f`g`h`Y`f`g`Y`V`gh`gh`Å`b`X][`Y`f`H`U`i`W`[`U`b[
n`k`]g`W`Y`b`K`f`U`W`_`g`i`b`X`G`W`]X`_`f`Ø`h`Y`b`k`U`f`Y]b`<][`\\`][`h`"@Y`g`Y`b`G]Y`
a`Y`f`]b`H`U`i`W`Y`b`a`]h`G`W`]X`_`f`Ø`h`Y`b`]b`G`U`a`c`U`"

(`" `@`U[`i`b`Y`j`c`b`6`c`f`U`6`c`f`U`ž`:`f`U`b`n`Ø`g]g`W`!`D`c`m`b`Y`g]Y`b`

,`V`Y`f`f`U`g`W`Y`b`X`Y`f`k`Y]g`Y`f`U`b[`]Y`f`h`:`f`U`b`n`Ø`g]g`W`!`D`c`m`b`Y`g]Y`b`]b`6`Y`ni`[
U`i`Z`X]Y`V`Y`g`i`W`h`Y`b`C`f`h`Y`[`U`b`n`i`b`h`Y`b`f`l`]b`h`Y`f`G`U`a`c`U`ž`:`]X`g`W`]ž`
H`c`b[`U`ž`J`U`b`i`U`h`i`i`b`X`X`Y`b`7`c`c`_]bg`Y`b`Ł`"8`Y`f`;`f`i`b`X`X`U`Z`Ø`f`]gh`ž`X`U`gg`
Y`g`g]W`j`]Y`_`c`a`a`Y`f`n]Y`Y`f`U`b`Z`Ø`h`z`U`V`Y`f`Y`g`]gh`b]W`h`ni`Y`i`[`b`Y`b`ž`
X`U`gg`X]Y`@`U[`i`b`Y`j`c`b`6`c`f`U`6`c`f`U`g`c`n]Y`a`_`]W`X`Y`f`<]a`a`Y`U`i`Z`
9`f`X`Y`b`]gh`"@Y`g`Y`b`G]Y`a`Y`f`]b`6`c`f`U`6`c`f`U`@`U[`i`b`Y`b`h`c`i`f`i`h`
U`b[`Y`Y[`h`Y`g`;`Y`X`"

)`" `5`i`Z`Y`b`h`U`h`]b`Y]b`Y`a`G`h`f`U`b`X`Z`U`Y`ž`G`U`a`c`U`

G`U`a`c`U`k`U`f`k`U`f`g`W`Y]b`]W`i`bg`Y`f`@]Y`V`]b[`g`U`b`X`]bg[`Y`g`U`a`h`
6`Y`g`c`b`X`Y`f`g`[`Y`Z`U`Y`b`_`U`h`i`bg`J`U`j`_`U`6`Y`U`W`:`U`Y`U`b`X`Y`f`B`c`f`X`_`Ø`gh`Y`

j cb' l dc' i " '8]YgY': U'Y'k YfXYb' j cb'8 Uj Yž'Y]bYa 'c_U'Yb
; YgWÅZhga Ubb' i bX'9fnÅ\`Yfž' [YZØ\fh' i bX'V]YhYb'Y]bYb
UhYa VYfUi VYbXYb' GhfUbXUVgWb]hhž'Y]bZUWYb'Ni [Ub['ni
YfghUi b`]WYb'BUhi fk i bXYfbž' _Ògh]WYg'`c_U'Yg'9ggYb' i bX
[`Y]W [Yg]bbhY'FY]gYbXY" '@YgYb'G]Y'a Y\ f']b'9]bY'A]`]cbYb!8c`Uf!
5bg]W'h'c\ bY'XUg'DfY]ggW]X"

'U`h1 2 5h`Ug/ '6cchg'5hYa VYfUi VYbXYf'GcbbYbi bhYf[Ub['Ua
J U]i `U'6YUW : U'Y

H=9: G

%" 7Ua d]b[`VY]'6Yj Yf`m gž':]XgW]

K]f'\UVYb'X]YgYg'J]XYc'Ub'HU['%Ui Z[Ybca a Yb"5a '5VYbX'j cb
HU[' 'k Uf']W]a 'A Y'hXck b!A cXi g"8]Y' i bYfV]hh]WYb'<i bXYž'X]Y
XfYW_] [Y?ca a cXYž'X]Y? fÒhYž'X]Y' bUW]hg']a '6UXYn]a a Yf'Ui Z
a Y]bYa ' : i » 'UbXYhYž'XYf'GW'UZa Ub[Y`Xi fW'Y]b
i bni fY]WYbXYg'@i Zh_]ggYb' 'U'Yg'gi a a]YfhY'g]W "'Ni a ' ; `ØW_
k UfYb'X]Y'dUUF'A U'Yž'X]Y'k]f'gY]hXYa ' [YnY'hYh'\UVYbž']Y'ž']Y'
VYggYf' '@YgYb'G]Y'a Y\ f']b'7]hm;]f'ž'7ci bhfm'6cm'Ni a 'YfghYb'A U'
ni gUa a Yb'WJa dYb"

&" J Yf`UggYb'XYg'D58 =? i fgYgž'J Ubi Uhi

⇒W '\UggY'Yg'Ui Zni \ÒfYbž'U`gc'k Uf'Yg'b]W'h'XUgž'k Ug']W'Yfk UfhYh
\UhhY"'5i Z\ÒfYb'VYXYi hYhž'XUgg']W' b]W'h'i bVYUi Zg]W'h][h
hUi WYb' _Ubb' i bX']a a Yf'a Y\ f'VYnU\`Yž'U`g'k Ybb']W' 'ei U`]Zn]Yfh
k ÅfY"² ZZYbh]W']gU[Y']W'ž'XUgg']W' [Y'Yfbh'\UVY'Ui Zni \ÒfYb"
Df]j Uh'\cZZ']W']a a Yf'bcW'ž'Yg'Y]bYg'HU[Yg'bcW'Y]ba U'
j Yfgi WYb'ni ' _ÒbbYb"

'U`h1 2 5h`Ug/ '6cchg'⇒W'a UWY'a Y]bYb'VYghYb'9]bXfi W_]cb
A W Um'U'A UfcbYmž'bUWXYa ']W' a Y]b'D58 =j Yf'UggYb'\UVY

' " 'l bgYfY'; cDfc'fi]b]YfYbž'Hcb[U

⇒W' [`Ui VY'k]f_]W'ž'XUg'\Uh'DYhYf'XUg'<Yfn'[YVfcWYb"'K]f

k UfYb`]b`Hcb[U`hUi W`Ybž`]W`a`]h`a` Y]bYf`6Y[`Y]hdYfgcb`i bX`DYhYf`
i bUV`Àb[][`a`]h`gY]bYa` `HUi W`dUfhbYf`fY]bY`bchk YbX][Y
G]W`Yf`Y]hgj cf`_Y`fi b[`B`UW`i b[`Ui V`]W`Yb`(`) `A`]bi hYb`_Ua` Yb
k]f`c`W`"DYhYfg`YfghY`K` cfhY`k UfYb` `W`[`Ui VYž`]W` \UVY`a` Y]bY
; cDfc`fi]b]Yfh` `bi`f`nk`Y]K` cW`Yb`bUW`XYa` `Yf`g]Y`[Y`_Ui`Zi`UhhY`"
HUhg`ÀW`]W` \UhhY`Yf`XUg`i bX`Yf`VY`_U[h`Yg`ZUgh`YXYb`HU["

`U`h1` 2`5`h`Ug`/` `6`c`c`hg`5`\ž`X]YgY`[`ØW`_]W`Yb`HU[Yž`VYj` cf`DYhYf`
i`bg`YfY`;` cDfc`fi`]b]YfhY`

(`"K`]f`j`Yf`]YfYb`i`bg`Yf`;` Yd`ÀW`_ž`GUa` cU`

K`]f`\UhhYb`b]W`h[Yd`Ubhž`gY`f`Ub[Y`]b`5d]U`ni` `V`Y]VYb`"
<Ui`d`hgh`ÀXhY`g]bX`]b`XYf`FY[Y`Ui`hž`ghUi`V][`i`bX`c`Zi`fY]n`cgž`XU`Yf`
j`Yf`UggYb`k`]f`g]Y`]a` a` Yf`gc`gW`bY`k`]Y`a` Ò[`]W`"@Y]XYf`\Uh`:]`
5]fk`Umg`i`bg`Yf`;` Yd`ÀW`_j`Yf`cfYbž`U`gc`a` i`gghYb`k`]f`nk`Y`
ni`g`Àh`]W`Y`HU[Y`]b`i`bg`YfYf`fY]n`cgYb`<YfVYf[Y`V`Y]VYb`i`bX`X]Y`
[`Y]W`Yb`j`YfgW`k`]hnhYb`?`Ua` chYb`hfU[Yb`"I`bb`Òh][`ni`Yfk`À`\bYbž`
XUgg`k`]f`i`bg`YfY`YfghY`B`UW`h`XUa`]h]YfVfUW`hYbž`I`bhYfk`ÀgW`Y`ni`
k`UgW`Yb`"

`U`h1` 2`5`h`Ug`/` `6`c`c`hg`GW`Ui`Yb`G]Yž`k`Ug`G]Y`i`bg`XUni`[YVfUW`h`
\UVYbž`:]`5]fk`Umg`

)`"K` UggYfa`Ub[Y`Ua` `A`h` `A`UhUj`Ubi`ž`GUa`cU`

K`Ybb`b]W`h`XfY]`A`YX]n]bghi`XYbHb`XYb`K`Y[`\]bi`bhYf[YZU`fYb`
k`ÀfYbž`k`ÀfYb`DYhYf`i`bX`]W`g]W`Yf`b]W`h`bi`f`j`cf`8Y`mXf]Yfi`b[ž`
gcbXYfb`Ui`W`j`cf`<]hnY`i`bX`9fgW`ÒdZi`b[`]b`C`\ba`UW`h[YZU`Yb`"
A`UhUj`Ubi`k`Uf`Y]bY`*!ghØbX][Y`K`UbXYfi`b[`i`bX`c`V`k`c`\`Yg`gY`hYb`
ghY]`k`i`fXYž`Y]»`X]Y`UVgc`i`h`i`bYfV]h]W`Y`GcbbY`GUa`cUg`Ua`
F`UbX`gW`k`Ub`_Yb`"Ni`a` `;` `ØW`_a`UW`hYb`X]Y`GUb]h`hYf`D`Uhn`ZØf`i`bg`
]b`]fY`a` `5i`hc`i`bX`j`Yfgcf[hYb`i`bg`a`]h`fY]W`]W`K`UggYf`" `W`
XYb`_Yž`ni`gU[Ybž`XUgg`G]Y`8`U`7`fU`hY`fa`Ub`[Yhfc`ZYb`\UVYbž`Z`À`h`
`ÀbYb`b]W`h`Y]W`h`@YgYb`G]Y`a`Y`f`]b`HfY`ZYb` `8`U`7`fU`hY`fa`Ub`
k`Y`hVYfØ`a`h`]b`GUa`cU` "

8`U`7`fU`hY`fa`Ub`Yf`_Yb`b`hž`XUgg`?`]U`gY]b`YfghYf`6Ygi`W`Yf`Ui`g`

6Ub[`UXYgWk `]gh

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

.

8YhU]`g

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